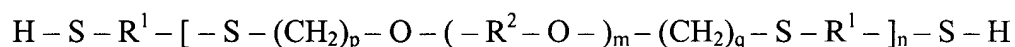


**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1-21. (Canceled).

22. (Previously presented) A polythioether comprising:



wherein

$\text{R}^1$  is selected from the group consisting of  $\text{C}_{2-6}$  n-alkylene, and a  $-[( - \text{CH}_2 )_p - \text{X}]_q - ( - \text{CH}_2 )_r -$  group;

$\text{R}^2$  is selected from the group consisting of  $\text{C}_{2-6}$  n-alkylene, and  $\text{C}_{6-8}$  cycloalkylene;

X is selected from the group consisting of O and S;

m is an integer between 0 and 10;

p is an integer between 2 and 6;

q is an integer between 1 and 5;

r is an integer between 2 and 10; and

n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

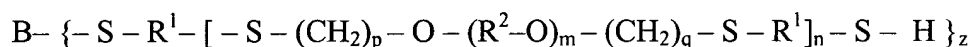
23. (Previously presented) The polythioether of claim 22 wherein  $\text{R}^1$  is  $\text{C}_2\text{-C}_6$  n-alkylene.

24. (Previously presented) The polythioether of claim 22 where  $\text{R}^1$  is  $-[( - \text{CH}_2 - )_p - \text{O} - ]_q - ( - \text{CH}_2 - )_r -$  where r, p, and q are 2.

25. (Currently amended) The polythioether of claim 22 wherein  $R^2$  is  $C_2$  alkyleneoxy.
26. (Previously presented) The polythioether of claim 22 wherein the molecular weight of said polythioether ranges from about 2000 to about 5000 Daltons.
27. (Previously presented) The polythioether of claim 22 having an atomic percentage ratio of C:S:O of 35-49 : 20-60 : 0-20.

28-30. (Canceled)

31. (Previously presented) A mixture of polythioether polymers comprising:  
a polythioether polymer having the formula



wherein

$R^1$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and a  $-[(-CH_2)_p-X]_q-(-CH_2)_r-$  group;

$R^2$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and  $C_{6-8}$  cycloalkylene;

X is selected from the group consisting of O and S;

m is an integer between 1 and 10;

p is an integer between 2 and 6;

q is an integer between 1 and 5;

r is an integer between 2 and 10;

z is an integer from 3 to 6;

B is a z-valent group of a polyfunctionalizing agent; and

n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

32. (Previously presented) The polythioether mixture of claim 31 wherein z is 3.
33. (Previously presented) The polythioether mixture of claim 31 wherein the mixture has an average functionality between 3 and 4.
34. (Previously presented) The polythioether mixture of claim 33 wherein the average functionality is between 2.05 and 3.00.
35. (Previously presented) A curable composition comprising:  
40 to 80 weight percent of a polythioether polymer according to claim 22,  
5 to 60 weight percent of a filler and 10 weight percent of a curing agent.
36. (Previously presented) The curable composition of claim 35 further comprising one or more additives selected from the group consisting of: pigments, cure accelerators, adhesion promoters, thixotropic agents and isopropyl alcohol.
- 37-40. (Canceled).

41. (New) The polythioether of claim 22, wherein  $r$  is an integer between 2 and 6,  $R^2$  is  $C_{2-6}$  n-alkylene, and  $m$ ,  $p$  and  $q$  are each 2.
42. (New) The polythioether mixture of claim 31, wherein,  $r$  is an integer between 2 and 6,  $R^2$  is  $C_{2-6}$  n-alkylene, and  $m$ ,  $p$  and  $q$  are each 2.
43. (New) A curable composition comprising: 40 to 80 weight percent of a polythioether polymer according to claim 41, 5 to 60 weight percent of a filler and 10 weight percent of a curing agent.